What is claimed is:

1   1.   A method of interactive image retrieval based on user-

2   specified regions, comprising:

3   providing a sample image;

4   dividing the sample image into a plurality of regions;

5   selecting one or more sample regions for feature extraction,

6   and defining corresponding logic operators; and

7   constructing a composite query instruction based on the

8   selected   sample   regions   and   their   corresponding   logic

9   operators and searching the image database according to the

10 composite query instruction.

1   2.   The method as claimed in claim 1, comprising selecting the

2   images   that   contain   the   regions   corresponding   with   the

3   composite query instruction.

1   3.   The method as claimed in claim 1, wherein the step of

2   dividing the sample image into a plurality of regions uses a

3   edge   detection   method   to   divide   the   sample   image   into   a

4   plurality of regions.

1   4.   The method as claimed in claim 1, wherein the step of

2   dividing the sample image into a plurality of regions uses a

3   color quantization method to divide the sample image into a

4   plurality of regions.

1   5.   The method as claimed in claim 1, wherein the step of

2 dividing the sample image into a plurality of regions uses a

3 region splitting and merging method to divide the sample image

4 into a plurality of regions.

1 6.   The method as claimed in claim 1, wherein the step of

2 dividing the sample image into a plurality of regions uses a

3 region growing method to divide the sample image into a

4 plurality of regions.

1 7. The method as claimed in claim 1, wherein the image features

2 include color distribution, texture, position and shape.

1 8. The method as claimed in claim 1, wherein the image features

2 include tone, brightness and chromatic saturation.

1 9. The method as claimed in claim 1, wherein the logic operators

2 include "and", "or", "exclusive-or" and "not".

1 10.   A method of interactive image retrieval based on user-

2 specified regions, comprising:

3   providing a sample image;

4   selecting one or more sample regions from the sample image

5 by a region selection tool and defining corresponding logic

6 operators between the selected regions;

7   extracting the image features of the selected sample

8 regions; and

9   constructing a composite query instruction based on the

10 selected sample regions and their corresponding logic
11 operators and searching the image database according to the
12 composite query instruction.

1 11. The method as claimed in claim 10, comprising selecting
2 the images that contain the regions corresponding with the
3 composite query instruction.

1 12. The method as claimed in claim 10, wherein the image
2 features include color distribution, texture, position and
3 shape.

1 13. The method as claimed in claim 10, wherein the image
2 features include tone, brightness and chromatic saturation.

1 14. The method as claimed in claim 10, wherein the logic
2 operators include "and", "or", "exclusive-or" and "not".